BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

FILED
5-18-16
04:59 PM

Order Instituting Rulemaking to Consider Alternative-Fueled Vehicle Programs, Tariffs, and Policies.	Rulemaking 13-11-007 (Filed November 14, 2013)

OPENING WORKSHOP COMMENTS OF SAN DIEGO GAS & ELECTRIC COMPANY (U 902-E)

E. Gregory Barnes
Attorney for
SAN DIEGO GAS & ELECTRIC COMPANY

8330 Century Park Court, CP32D
San Diego, California 92123
Telephone: (858) 654-1583
Facsimile: (619) 699-5027
Email: gbarnes@semprautilities.com

May 18, 2016

TABLE OF CONTENTS

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Consider Alternative-Fueled Vehicle Programs, Tariffs, and Policies.	Rulemaking 13-11-007 (Filed November 14, 2013)

OPENING WORKSHOP COMMENTS OF SAN DIEGO GAS & ELECTRIC COMPANY (U 902-E)

Pursuant to the *Amended Scoping Memo and Ruling of the Assigned Commissioner and Administrative Law Judge* (March 30, 2016), ("amended scoping memo") San Diego Gas and Electric Company ("SDG&E") submits these comments on the Commission's April 29, 2016 workshop, held in collaboration with the Air Resources Board ("ARB") and California Energy Commission, on transportation electrification issues raised by Senate Bill 350 ("workshop").

I. INTRODUCTION – THE SB 350 CONTEXT

SDG&E thanks the California Public Utilities Commission ("CPUC") and Commissioner Peterman for launching the most progressive and informative utility electric transportation program in the nation, and for acting swiftly to implement Senate Bill ("SB") 350. Governor Brown has established goals for the State of California to have sufficient grid-integrated electric vehicle charging infrastructure in place to support one million zero emission vehicles by 2020. SB 350 now requires California to advance more aggressively toward widespread transportation electrification.

SB 350 has set into law certain requirements and expectations that California must address:

- It directs the state to look at … "vehicles, vessels, trains, boats and other equipment that are mobile sources of air pollution and greenhouse gases ..."

- It finds and declares that " … [w]idespread transportation electrification requires electrical corporations to increase access to the use of electricity as a transportation fuel."[1]

In enacting SB 350, Governor Brown and the Legislature have created a call-to-action which requires urgent action if California's electric vehicle goals are to be met. California and the electric vehicle industry are at a unique moment in time where the recent advances in battery and vehicle technology are ripe for an accelerated transition of the transportation sector away from fossil fuels. However, the catalyst to this transition will be the widespread availability of charging infrastructure, among other market conditions. SDG&E believes that California and the utilities play an important role in educating customers about the benefits of transportation electrification, as well as developing solutions that efficiently integrate electric transportation with the utility grid in a manner that benefits ratepayers. In addition, well designed utility transportation electrification programs can enable market growth by promoting competitive markets, and maximizing the use of market-based solutions.

In response to the amended scoping memo, SDG&E provides the following workshop comments, as well as related input on the Straw Proposal found in the amended scoping memo's Appendix A, and answers to the questions posed in its Appendix B.

---

[1] SB 350, Section 32, adds Section 740.12(b) to the Public Utilities Code, which states:

> The commission, in consultation with the State Air Resources Board and the Energy Commission, shall direct electrical corporations to file applications for programs and investments to accelerate widespread transportation electrification to reduce dependence on petroleum, meet air quality standards, achieve the goals set forth in the Charge Ahead California Initiative (Chapter 8.5 (commencing with Section 44258) of Part 5 of Division 26 of the Health and Safety Code), and reduce emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.

II. OVERVIEW OF SDG&E'S RECOMMENDED GUIDELINES FOR THE COMMISSION'S CONSIDERATION

SDG&E contends that the Commission can accelerate the achievement of state goals through a balanced public-private partnership approach. This approach will help to efficiently integrate transportation electrification loads with the grid. As stated at the Commission's April 29th workshop, SDG&E offers four key guidelines for the Commission's consideration:

1. Focus on Goals and Guiding Principles
2. Provide Funding Certainty
3. Optimize the Use of the Grid
4. Consider a "Customer-Led" Approach

A. Focus on Goals and Guiding Principles

The Commission should create a flexible and expedient regulatory framework where utility proposals address customer specific needs and technology solutions. The forthcoming applications by the utilities are meant to address transportation electrification of a wide range of customer and transportation technologies over diverse geographical regions. As discussed by Rebecca Lee of the Commission's Policy and Planning Division at the workshop, it is important to craft transportation electrification plans that are sensitive to local and regional economics and needs. This suggests avoiding a "one-size-fits-all" if adopted simply for the sake of consistency.

Priorities should be based on near-term and long-term cost-effective opportunities that meet the objectives of SB350. Utility proposals will address customer-specific needs and technology solutions, which will allow utilities and stakeholders to explore:

- Solutions for specific transportation customer segments
- Resources to help customers overcome adoption barriers and seize opportunities

- Comprehensive educational responsibilities with all stakeholders

B. Provide Funding Certainty

The Commission should authorize 3 to 5 year programs. A program of sufficient length, with associated funding, will send signals to the market and create certainty, which will encourage competition, innovation and investment among multiple vendors. A 3 to 5 year program horizon fits well with commercial customer business planning cycles, and allows programs and customers to leverage all funding resources. This is especially important for customers who are required, or prefer, to competitively bid out fleet projects. Customer-driven policy of this nature directly addresses one of SB 350's declarations, where widespread transportation electrification is found to stimulate innovation and competition, enable consumer options in charging equipment and services, and attract private capital investment.[2] A customer-driven competitive bidding process will help preserve and promote competitive markets, and maximize the use of market-based solutions. Finally, a 3 to 5 year funding horizon will provide lead time for the market to ramp-up, helping those who may not be able to immediately take advantage of today's opportunities.

C. Optimize the Use of the Grid

The efficient integration of transportation electrification loads with the grid will provide benefits to ratepayers by integrating renewable energy resources and improving grid utilization (*e.g.*, shifting charging loads to off-peak periods) through rate design, utility infrastructure and technology solutions. There are multiple ways to explore the efficient integration of transportation electrification with the grid. Especially for commercial customers, these

[2] SB 350 adds Section 740.12, (a) (1) (F) to the Public Utilities Code which states, "Widespread transportation electrification should stimulate innovation and competition, enable consumer options in charging equipment and services, attract private capital investments, and create high-quality jobs for Californians, where technologically feasible."

approaches must be sensitive to and compatible with the customer and their fleet operations. While widespread electrification offers multiple benefits to California, there could be negative consequences if these loads are not efficiently integrated with the grid. If done right, the state of California will be able to integrate electric vehicle charging into the grid to take advantage of the availability of renewable energy while minimizing the need for new transmission and distribution facilities. If done wrong (*e.g.*, EV charging loads impacting peaking grid conditions), California may have to add new fossil fueled generation infrastructure along with new transmission and distribution facilities.

D. Consider a "Customer-Led" Approach

SDG&E requests that the utility programs include measures and resources necessary to help customers exhaust all grant funding opportunities. Customer needs are unique and varied and utility proposals should include customer buy-in up-front. "Customer-led" means that proposals are total cost of ownership focused, and technology agnostic. It is important to understand the requirements of fleet operators in order to explore ways technical and operational solutions to help enable load-shifting flexibility, where possible. For example, load-shifting solutions could include innovative rate design with enabling technology, as well as ownership alternatives for transportation infrastructure and vehicle batteries. As noted above, utility programs should include funding for resources to help customers overcome adoption barriers and seize opportunities, such as utility:

- expertise and funding to help identify, apply for, and support relevant grant opportunities;
- resources to assist with total cost of ownership analysis;

- help brokering commercial customers' Low Carbon Fuel Standard credits; and,
- education programs that are targeted and comprehensive.

SDG&E believes that SB 350 creates an opportunity for the Commission to guide the utilities in the development of their proposals to accelerate widespread transportation electrification.

III. RESPONSE TO SCOPING MEMO APPENDIX B – WORKSHOP QUESTIONS

1. In what ways should the Application Guidance Straw Proposal in Appendix A of this Scoping Memo be modified to better align with the mandates of SB 350?

The Commission should primarily focus on developing goals with guiding principles and let the utility proposals target how these goals can be met with the customers in their service areas.

Straw Proposal – SDG&E proposes changes to the CPUC Straw Proposal that emphasize grid-integrated charging, as well as the development of utility programs that help to stimulate innovation and competition, and attract private capital investment. These proposed changes are found in red-line/strikeout format in Appendix A hereto.

2. In light of current industry development and technology availability, should the Commission focus on particular transportation sectors or market barriers (e.g., light, medium or heavy duty vehicles, fuel types, or specific applications), and why?

As indicated in SDG&E's comments to the CPUC's Straw Proposal (*see* Appendix A), applications should delineate individual proposals for each customer segment of the transportation sector and propose 3 to 5 year pilots and/or programs with associated budgets for each segment. Priorities should be based on near-term and long-term cost-effective opportunities

that meet the objectives of SB350. Utility proposals will address customer-specific needs, market barriers and technology solutions, which will allow utilities to explore:

- Solutions for specific transportation customer segments
- Resources to help customers overcome adoption barriers and seize opportunities (*e.g.*, resources to help prepare grant funding applications)
- Comprehensive educational responsibilities with all stakeholders

Focus on the "what", not the "how" – The Commission should primarily focus on developing goals (and guiding principles) and let the utilities, under a balanced public-private partnership approach, provide proposals that target how these goals can be met, including specific technology solutions. It is particularly important to not prescribe how these goals will be met, for example, by transportation sector priorities or through specific technology and fuel pathways. Each utility proposal will identify applicable barriers and transportation sectors that should be targeted to meet the goals.

As noted above, each region will have unique customer and market opportunities as well as barriers and economic considerations. Although some transportation segments may offer large GHG reduction potential, customers within that segment may not yet be ready to aggressively pursue the technology immediately. Utility proposals should reflect realistic timelines for adoption. For certain customers, a small pilot may prove to be useful to first study the technology and economics of an electrification solution, before a larger investment can be considered. For other segments and customers, a full scale fleet implementation plan may make economic sense. More importantly, movement toward grid-integrated solutions for customers in the near term will help to provide immediate value to customers, as well as avoid grid impacts that will potentially negatively affect all ratepayers in the long term.

3. What needs for standards development, research and development, or pilot projects exist that should be addressed by the Commission? What ongoing initiatives may be ready for increased scale?

With the integration of renewables, the net load curve for the individual utilities and the California Independent System Operation (CAISO) has drastically changed. Some utilities may be facing challenges with grid stability or aging of assets such as increased wear and tear on combined cycle generation units due to the unpredictable intermittency of certain generation sources. SDG&E believes that, if done correctly, the integration of electric vehicles, coupled with proper rate design, will play a big role in helping mitigate these grid issues while simultaneously helping meet the climate change initiatives under AB 350. The Commission should continue to explore transportation electrification through multiple and various pilots and programs, uniquely suited to the customers of a given region.

Grid-integration Exploration – SDG&E believes that there are multiple ways to explore the efficient integration of transportation electrification with the grid. These approaches must be sensitive to and compatible with the customer and their fleet operations. As such, there will be many applications unique to a given customer's operational needs. Much more will be learned as SDG&E and the state advance toward widespread electrification. It is reasonable to expect that there is not a single solution that will work for all applications and customer segments.

Accurate Price Signals – Applicable rates for transportation electrification should be designed to reflect the cost of services provided. Utilities should be permitted to explore ways to test different rate design structures that will encourage the efficient integration of transportation electrification with the utility grid, as the Commission has done with approving SDG&E's Vehicle-Grid Integration application (A.14-04-010, *approved,* D.16-01-045). Accurate price signals in rate design are an efficient means to ensure that charging behavior minimizes future

measures to fix load problems and minimizes the need to build unnecessary generation and/or transmission and distribution infrastructure to meet unmanaged peak EV charging demand. Accurate price signals in rate design will also pass along the value directly to EV drivers and fleet operators who charge during times of optimal grid conditions. Accurate prices will enable grid optimization benefits for all customers.

4. What should the application guidance ruling consider about the issues raised in the ARB workgroup meeting of April 8, 2016, and the issues raised at the April 29, 2016 workshop?

Guiding Principles – As noted above, through the Commission's process outlined in the Amended Scoping Memo, a set of guiding principles that correspond with the Commission's goals should be developed to provide guidance for utility applications.

Adopt a Balanced, Public-Private Partnership – Utilities can take on a facilitation role by requesting funding to provide resources necessary to help fleet operators prepare grant applications, support electrification through infrastructure upgrades (for example, such as separate service line extensions, distribution system upgrades, grid-integrated charging equipment and potentially batteries, depending on the need and availability of grants to cover these items). This is a "customer-led" approach that will ensure full utilization of utility investment in the infrastructure to serve these loads.

Customer-led Process – As we explore transportation electrification with commercial customers and fleet operators there may be differences in proposals across the utilities. Many of these proposals will be customized to meet the needs of a specific or similar set of commercial customers. This will be a "customer-led" process, and it's likely that specific customers will already be engaged by the utility, and fully supportive of a given proposal. This has many benefits, with one of them being an increase in certainty that a given proposal will be

implemented effectively. These are business customers who will likely focus on the "total cost of ownership" calculation, which in and of itself will help inform Commission policy.

Coordinate with the CEC and CARB – A preferred approach is for the CEC and CARB to give priority to awarding grants directly to customer and fleet operator applicants (*e.g.*, instead of 3rd parties). This allows the fleet operator to competitively bid out their fleet requirements to vendors. This approach creates cost competitiveness, drives down first cost, and spawns commercially valued innovation. These grants are expected to help offset the first cost of the vehicle and charging equipment.

Coordinate with Executive Agencies and Commissions – As recommended above regarding the proposal timeframe, with a balanced, public-private partnership approach, utilities will facilitate working with fleet operators and third parties to prepare grants applications early on, but action needs to be taken immediately to ensure that at least three to five year grant and incentive funding horizon is achievable. This creates certainty for investment and works well with fleet operator business cycles and budget planning.

IV. CONCLUSION

SDG&E requests the Commission to adopt the foregoing recommendations.

Respectfully submitted,

/s/ E. Gregory Barnes

E. Gregory Barnes
Attorney for
SAN DIEGO GAS & ELECTRIC COMPANY

8330 Century Park Court, CP32D
San Diego, California 92123
Telephone: (858) 654-1583
Facsimile: (619) 699-5027
Email: gbarnes@semprautilities.com

May 18, 2016

APPENDIX A
PROPOSED SPECIFIC CHANGES (REDLINED)
TO THE STRAW PROPOSAL

General Guidance

1. Applications should delineate individual proposals for each segment of the transportation sector and propose ~~2~~3-5 year pilots and/or programs with associated budgets for each segment.

2. Initiatives may be regional or statewide, but must consider regional transportation conditions and plans and leverage federal funds.

3. Applications must:

    a. Minimize cost and maximize benefit.

        i. Account for ratepayer interest as defined in Section 740.8.

        ii. ~~Protect/promote competitive markets~~ Stimulate innovation and competition and ~~complement~~ attract private capital investments.

        iii. Prioritize sectors with high emissions reduction potentials.

            1. Consider potential for technology maturation and market transformation.

            2. Leverage natural turnover and high-impact decision makers.

        iv. Ensure electric vehicle charging is integrated into the electric grid so as to optimize the use of renewable energy resources and minimize the need for new fossil fueled generation and transmission and distribution investments.

    b. Align with California policies.

        i. Complement, inform, and coordinate with existing state agency initiatives at the California Energy Commission (CEC) and ARB (and other agencies), Governor's Executive Orders (B-16-2012, B-30-15, and B-32-15)/International ZEV Alliance, and CAISO initiatives, specifically:

            1. Coordinate with Regional Plans (SB 375, Fixing America's Surface Transportation "FAST" Act) & Infrastructure Readiness Plans (AB 8, AB 118).

            2. Coordinate with standardization efforts (SB 454, P.U. Code 740.2).

3. Coordinate with other SB 350 initiatives, the California Vehicle-Grid Integration Roadmap, and CAISO distributed resource proceedings (e.g. ESDER, DERP).

4. Coordinate with CEC and ARB research and forecasting initiatives, demonstration and pilot programs, and outreach and education activities.

5. Promote diversity in customer and community access, economic development, and supply chain development (SB 1275, SB 535, CPUC and CEC's supplier diversity goals).

ii. Complement, inform, and coordinate with other CPUC initiatives.

1. E.g., Integrated Resource Plans, Distributed Resource Planning, Integration of Distributed Energy Resources, Time-Of-Use, Energy Storage, Demand Response, Electric Program Investment Charge, etc.

c. Fit with CPUC and IOU/core competencies and capabilities

d. Ensure driver, customer, and worker safety.